

# **Harlequin Duck Research and Monitoring in Montana: 1999**

A Report to:

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## **ABSTRACT**

In 1999, approximately 88 km of Harlequin Duck stream surveys were conducted on five streams, with the majority of effort focused on four Lower Clark Fork streams (Rock Creek, Swamp Creek, Marten Creek, Vermilion River). Additional streams surveyed were Trail Creek (North Fork Flathead River drainage) with one pair survey and one brood.

On the Lower Clark Fork streams, stream flow was normal during early-May pair surveys. A minimum of 22 adult Harlequins (12 males, 10 females) was seen on 3 streams. These included Marten Creek (4 pairs, 2 males, 1 female), Rock Creek (2 pairs), Vermilion River (3 pairs, 1 male) and Swamp Creek (no birds). The number of birds observed was about average for each stream and all streams combined, although Swamp Creek again had no birds.

Brood surveys were conducted during early August 1999. Only three broods were observed on the Lower Clark Fork streams (1 each on Marten Creek, Vermilion River, and Rock Creek), successfully producing a maximum 1 young on Marten Creek, 3 young on Vermilion River, and 5 young on Rock Creek. Age of broods indicated that nesting was more concentrated in time than during 1998.

New birds were banded on Marten Creek (1 female, 1 juvenile) and Rock Creek (4 juveniles). Additionally, several previously marked birds were re-observed, including 2 fourth-year females banded as juveniles in 1995 (1 of which successfully raised a brood on its natal stream). No inter-stream movements among the Lower Clark Fork streams were documented in 1999.

Stream survey results from Trail Creek (N. Fork Flathead drainage) were as follows: four pairs and 1 male counted on 16 May, no females or broods on 7 August.

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